



## **WATER RESOURCES RESEARCH GRANT PROPOSAL**

**Project ID:** 2002DC1B

**Title:** Best Management Practices in Washington, D.C.

**Project Type:** Research

**Focus Categories:** Waste Water, Water Quality, Nitrate Contamination

**Keywords:** Stormwater, Best Management Practices, Water Quality

**Start Date:** 03/01/2002

**End Date:** 02/28/2003

**Federal Funds Requested:** \$12,438

**Non-Federal Matching Funds Requested:** \$17,094

**Congressional District:** DC

**Principal Investigator:**

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**Abstract**

This project is designed to examine the effectiveness of best management practices (BMPs) to retain stormwater pollutants from runoff over impervious surfaces. The federal government and local government agencies have funded, and/or partnered with other organizations funded, the construction of several bio-retention and sand filters as BMPs for the prevention of stormwater contaminated runoff in Washington D.C. in an effort to prevent the further degradation of the Anacostia and Potomac Rivers, as well as Rock Creek. There is a need to further understand how these BMPs are performing, which are the most effective, and if design improvements are possible for future BMP installations.

The degradation of natural water bodies caused by urban stormwater pollution is serious, and affects a significant proportion of the nation's population. Changes in land use that increase impervious cover lead to flooding, erosion, habitat degradation, and water quality impairment. Everyday activities such as driving, maintaining vehicles and lawns, disposing of waste, and even walking pets often cover impervious surfaces with a coating of various harmful materials. Construction sites, power plants, failed septic systems, illegal discharges, and improper sewer connections also contribute substantial amounts of contaminants to runoff.

The degradation caused by urban stormwater pollution is ubiquitous to all cities. Hundreds of millions of dollars are lost each year through added government expenditures, illness, or loss in economic output due to urban stormwater pollution. The ecological damage is at least as significant. This project will move the technology of BMPs one step closer to addressing the issues involved in the pollution of the natural water bodies by stormwater runoff over impervious surfaces in the watershed and will be applicable to stormwater issues throughout the country.